



Water-Data Report 2008

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°40'41", long 74°55'05" referenced to North American Datum of 1983, Union Township, Hunterdon County, NJ, Hydrologic Unit 02030105, 800 ft downstream from Rocky Run, 0.3 mi upstream from bridge on Van Syckel Road, and 1.6 mi southeast of Glen Gardner.

DRAINAGE AREA.--15.3 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1979, 1981-83, 1985-93, 1995-97, 1999, and 2003 to current year.

GAGE.--None.

**DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Date	Discharge, in ft ³ /s
Nov 15, 2007	10.8
Feb 19, 2008	91.1
May 7, 2008	13.8
Aug 4, 2008	6.00

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1979-97, 2003 to current year.

COOPERATION.--Samples were collected in cooperation with the NJ Water Supply Authority. Determinations of ammonia-plus-organic nitrogen in bed sediment and phosphorus in bed sediment were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 1 of 6

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Time	Sample medium and type	Instan- taneous dis- charge, ft ³ /s (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorb- ance, 254 nm, wat flt units (50624)	UV absorb- ance, 280 nm, wat flt units (61726)	Baro- metric pres- sure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of sat- uration (00301)
Nov 15...	1000	Surface water, regular	11	7.6	.070	.055	744	11.1	99
Feb 19...	0957	QC - Artificial, field blank	--	--	--	--	--	--	--
19...	1040	Surface water, regular	91	2.9	.072	.055	748	13.8	104
May 07...	1227	Surface water, regular	14	.6	.045	.034	753	9.9	98
Aug 04...	0900	QC - Artificial, churn blank	--	--	--	--	--	--	--
04...	0901	QC - Artificial, field blank	--	--	--	--	--	--	--
04...	1100	Surface water, regular	6.0	1.0	.051	.039	750	10.2	114

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 2 of 6

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf 25 degC (00095)	Temper- ature, wat unf deg C (00020)	Temper- ature, air, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)	Magnes- ium, water, mg/L (00915)	Potas- sium, water, mg/L (00925)	Sodium, water, mg/L (00935)	ANC, wat unf fixed end pt, lab, mg/L as CaCO ₃ (90410)	Chlor- ide, water, mg/L (00940)	Fluor- ide, water, mg/L (00950)	Silica, water, fltrd, mg/L as SiO ₂ (00955)	
Nov 15...	--	208	7.4	9.2	65	15.8	6.17	1.72	12.5	43	23.0	E.08	17.1
Feb 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	7.3	193	3.5	3.6	47	11.6	4.41	1.18	15.9	25	29.3	<.12	12.7
May 07...	7.8	198	29.0	15.1	61	14.7	5.89	1.23	13.2	38	23.4	E.10	16.2
Aug 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	7.9	242	21.6	20.0	74	18.5	6.83	1.77	13.1	48	25.7	.15	16.0

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 6

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L (00623)	Nitrate + nitrite water, fltrd, mg/L (00608)	Partic- ulate nitro- gen, susp, water, fltrd, mg/L (00631)	Total nitro- gen, water, fltrd, mg/L (49570)	Total nitro- gen, water, unfltrd mg/L (00602)	Ortho- phosphate, water, fltrd, mg/L (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, susnd sedim total, mg/L (00694)	
Nov 15...	18.1	E126	133	.14	<.040	1.20	E.03	1.3	E1.4	.012	.014	.021	.5
Feb 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	13.5	108	107	E.11	<.040	1.03	E.02	E1.1	E1.2	.008	.010	.016	.1
May 07...	17.0	E119	138	E.11	<.040	.98	E.02	E1.1	E1.1	.010	E.006	.010	.2
Aug 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	21.6	138	170	E.13	<.040	1.22	E.03	E1.4	E1.4	.015	.014	.016	.2

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 6

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Inor- ganic carbon, susnd sedimnt total, mg/L (00688)	Organic carbon, susnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Arsenic water, fltrd, μg/L (01000)	Arsenic water, unfltrd μg/L (01002)	Barium, water, unfltrd recover- able, μg/L (01007)	Beryll- ium, water, unfltrd recover- able, μg/L (01012)	Boron, water, unfltrd recover- able, μg/L (01020)	Boron, water, unfltrd recover- able, μg/L (01022)	Cadmium water, unfltrd recover- able, μg/L (01027)	Chrom- ium, water, unfltrd recover- able, μg/L (01034)	Copper, water, unfltrd recover- able, μg/L (01040)	
Nov 15...	<.04	.5	2.3	--	--	--	--	13	--	--	--	--	--
Feb 19...	--	--	--	<.06	--	--	--	--	--	--	<1.0	--	--
19...	<.04	.1	2.0	.08	<.60	22.5	<.04	7.7	E5	.02	E.30	--	E.11
May 07...	<.04	.2	1.4	--	--	--	--	9.1	--	--	--	--	--
Aug 04...	--	--	--	<.06	--	--	--	--	--	--	--	--	--
04...	--	--	--	<.06	--	--	--	--	--	--	<1.0	--	--
04...	<.04	.2	1.6	.14	<.60	26.5	<.04	11	12	E.01	<.40	--	E.89

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 5 of 6

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Mangan-										Suspended sediment concentration mg/L (80154)
	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, unfltrd recoverable, µg/L (01049)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, unfltrd recoverable, µg/L (01055)	Mercury water, unfltrd recoverable, µg/L (71890)	Nickel, water, unfltrd recoverable, µg/L (71900)	Nickel, water, unfltrd recoverable, µg/L (01065)	Selenium, water, unfltrd recoverable, µg/L (01147)	Silver, water, unfltrd recoverable, µg/L (01077)	Zinc, water, unfltrd recoverable, µg/L (01090)	
Nov 15...	--	--	--	--	--	--	--	--	--	--	4
Feb 19...	--	<.08	--	--	<.010	--	<.20	--	--	<1.8	--
19...	137	--	.21	7.3	--	<.010	--	.45	.16	<.02	--
May 07...	--	--	--	--	--	--	--	--	--	--	2
Aug 04...	--	E.08	--	--	<.010	--	--	--	--	4.0	--
04...	--	<.08	--	--	<.010	--	E.14	--	--	<1.8	--
04...	92	--	.09	11.2	--	<.010	--	.24	.14	<.02	--
											E1.1
											1

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 6 of 6

[QC, quality control sample. Remark codes:
 <, less than; E, estimated.]

Date	Suspended sediment discharge, tons/d (80155)
Nov 15...	.12
Feb 19...	--
19...	.49
May 07...	.07
Aug 04...	--
04...	--
04...	.02

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 7

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	1-Naph-thol, water, filtrd, 0.7u GF	2,6-Di-ethyl-aniline, water, filtrd, 0.7u GF	2Chloro- -2',6'-diethyl CIAT, wat flt	2-Ethyl- methyl- aniline water, filtrd, 0.7u GF	3,4-Di-chloro- chloro- aniline water, filtrd, 0.7u GF	3,5-Di-chloro- chloro- aniline water, filtrd, 0.7u GF	4-Chloro- 2methyl- phenol, water, filtrd, 0.7u GF	Aceto- chlor, water, filtrd, 0.7u GF	Ala- chlor, water, filtrd, 0.7u GF	alpha- Endo- sulfan, water, filtrd, 0.7u GF	Atra- zine, water, filtrd, 0.7u GF	Azin- phos- methyl oxon, water, filtrd, 0.7u GF	
	µg/L (49295)	µg/L (82660)	µg/L (61618)	µg/L (04040)	µg/L (61620)	µg/L (61625)	µg/L (61627)	µg/L (61633)	µg/L (49260)	µg/L (46342)	µg/L (34362)	µg/L (39632)	µg/L (61635)
May 07...	<.04	<.006	<.010	E.028	<.010	<.006	<.008	<.005	<.006	E.006	<.006	.011	<.04

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 7

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Azin- phos- methyl, water, filtrd, 0.7u GF	Ben- flur- alin, water, filtrd, 0.7u GF	Car- baryl, water, filtrd, 0.7u GF	Carbo- furan, water, filtrd, 0.7u GF	Chlor- pyrifos, oxon, water, filtrd, 0.7u GF	Chlor- pyrifos, water, filtrd, 0.7u GF	cis- Per- methrin, water, filtrd, 0.7u GF	Propi- conazole, water, filtrd, 0.7u GF	Cyana- zine, water, filtrd, 0.7u GF	Cyflu- thrin, water, filtrd, 0.7u GF	Iambda- Cyhalo- thrin, water, filtrd, 0.7u GF	Cyper- methrin, water, filtrd, 0.7u GF	DCPA, water, filtrd, 0.7u GF
	µg/L (82686)	µg/L (82673)	µg/L (82680)	µg/L (82674)	µg/L (61636)	µg/L (38933)	µg/L (82687)	µg/L (79846)	µg/L (04041)	µg/L (61585)	µg/L (61595)	µg/L (61586)	µg/L (82682)
May 07...	<.120	<.010	<.060	<.020	<.06	<.005	<.010	<.006	<.020	<.016	<.004	<.014	<.003

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 7

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Desulf- inyl- fipro- nil, water, filtrd, 0.7u GF	Diazi- non, water, filtrd, 0.7u GF	Dicro- tophos, water, filtrd, 0.7u GF	Diel- drin, water, filtrd, 0.7u GF	Dimeth- oate, water, filtrd, 0.7u GF	Disulf- oton, sulfone water, filtrd, 0.7u GF	Disul- foton, water, filtrd, 0.7u GF	Endo- sulfan, water, filtrd, 0.7u GF	EPTC, water, filtrd, 0.7u GF	Ethion monoxon water, filtrd, 0.7u GF	Ethion, water, filtrd, 0.7u GF	Etho- prop, water, filtrd, 0.7u GF	Fenami- phos sulfone water, filtrd, 0.7u GF
	µg/L (62170)	µg/L (39572)	µg/L (38454)	µg/L (39381)	µg/L (82662)	µg/L (61640)	µg/L (82677)	µg/L (61590)	µg/L (82668)	µg/L (61644)	µg/L (82346)	µg/L (82672)	µg/L (61645)
May 07...	<.012	<.005	<.08	<.009	<.006	<.01	<.04	<.022	<.002	<.02	<.006	<.012	<.053

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 7

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Fenami-phos sulf-oxide, water, filtd, µg/L (61646)	Fenami-phos, water, filtd, µg/L (61591)	Desulf-inyl-amide, wat flt µg/L (62169)	Fipro-nil sulfide, water, filtd, µg/L (62167)	Fipro-nil sulfone, water, filtd, µg/L (62168)	Fipro-nil water, filtd, µg/L (62166)	Fonofos (04095)	Hexazinone, water, filtd, µg/L (04025)	Iprodione, water, filtd, µg/L (61593)	Isofen-phos, water, filtd, µg/L (61594)	Mala-oxon, water, filtd, µg/L (61652)	Mala-thion, water, filtd, µg/L (39532)	Metaxyl, water, filtd, µg/L (61596)
May 07...	<.20	<.03	<.029	<.013	<.024	<.020	<.010	.009	<.01	<.006	<.020	<.016	<.007

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 5 of 7

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Methid-athon, water, filtd, µg/L (61598)	Methyl para-oxon, water, filtd, µg/L (61664)	Methyl para-thion, water, filtd, 0.7u GF µg/L (82667)	Metola-chlor, water, filtd, 0.7u GF µg/L (39415)	Metri-buzin, water, filtd, 0.7u GF µg/L (82630)	Moli-nate, water, filtd, 0.7u GF µg/L (82671)	Myclo-butanol, water, filtd, µg/L (61599)	Oxy-fluor-fen, water, filtd, µg/L (61600)	Pendi-methalin, water, filtd, 0.7u GF µg/L (82683)	Phorate, oxon, water, filtd, 0.7u GF µg/L (61666)	Phorate, oxon, water, filtd, 0.7u GF µg/L (82664)	Phosmet, oxon, water, filtd, 0.7u GF µg/L (61668)	Phosmet, oxon, water, filtd, 0.7u GF µg/L (61601)
May 07...	<.004	<.01	<.008	E.007	<.012	<.003	<.010	<.006	<.012	<.03	<.040	<.05	<.008

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 6 of 7

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Promo-ton, water, filtd, µg/L (04037)	Promo-tryn, water, filtd, µg/L (04036)	Propy-zamide, water, filtd, 0.7u GF µg/L (82676)	Propani-l, water, filtd, 0.7u GF µg/L (82679)	Propar-gite, water, filtd, 0.7u GF µg/L (82685)	Simazine, water, filtd, 0.7u GF µg/L (04035)	Tebu-thiuron, water, filtd, 0.7u GF µg/L (82670)	Teflu-thrin, water, filtd, 0.7u GF µg/L (61606)	Ter-bufos, oxon, sulfone, water, filtd, 0.7u GF µg/L (61674)	Terbu-fos, water, filtd, 0.7u GF µg/L (82675)	Ter-buthyl-azine, water, filtd, 0.7u GF µg/L (04022)	Thio-bencarb, water, filtd, 0.7u GF µg/L (82681)	trans-Propi-conazole, water, filtd, 0.7u GF µg/L (79847)
May 07...	M	<.006	<.004	<.006	<.04	.097	<.02	<.003	<.04	<.02	<.01	<.010	<.02

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO
SEPTEMBER 2008

Part 7 of 7

[Remark codes: <, less than; E, estimated;
M, presence verified but not quantified.]

Date	Tri-	flu-	Di-
	Tribu-	alin,	chlor-
	phos,	water,	vos,
	water,	filtrd	water,
	filtrd,	0.7u GF	filtrd,
	µg/L	µg/L	µg/L
	(61610)	(82661)	(38775)
May			
07...	<.035	<.009	<.01

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Ammonia + org-N, bed total, mg/kg	Phos- phorus, bed total, mg/kg	Inor- ganic Total carbon, bed sedimnt total, g/kg	Arsenic bed sedimnt total, g/kg	Cadmium bed recover -able, ug/g	Chrom- ium, bed sedimnt recover -able, ug/g	Cobalt bed recover -able, ug/g	Copper, bed sedimnt recover -able, ug/g	Iron, bed sedimnt total digest, ug/g	Lead, bed sedimnt recover -able, ug/g	Mangan- ese, bed sedimnt recover -able, ug/g		
Time	as N as P (00626)	as P (00668)	Total carbon, bed sedimnt total, g/kg (00693)	Arabic carbon, bed sedimnt total, g/kg (00686)	Cadmium bed recover -able, ug/g (64847)	Chrom- ium, bed sedimnt recover -able, ug/g (01028)	Cobalt bed recover -able, ug/g (01029)	Copper, bed sedimnt recover -able, ug/g (01038)	Iron, bed sedimnt total digest, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)	Mangan- ese, bed sedimnt recover -able, ug/g (01053)		
Aug 04...	1100	140	1,900	1.8	<.2	1.6	.090	21	7.7	19	25,000	13	210

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Mercury bed sedimnt recover -able, ug/g (71921)	Nickel, bed sedimnt recover -able, ug/g (01068)	Seli- num, bed sedimnt recover -able, ug/g (64848)	Zinc, bed sedimnt recover -able, ug/g (01093)	1,2-Di- methyl- naphth- alene, ug/kg (49403)	1,6-Di- methyl- naphth- alene, ug/kg (49404)	1Methyl -9H- fluor- ene, ug/kg (49398)	1- Methyl- phenan- threne, ug/kg (49410)	1- Methyl- pyrene, bed sed bed sed bed sed wsv nat	236Tri- methyl- naphth- alene, ug/kg (49388)	2,6-Di- methyl- naphth- alene, ug/kg (49405)	2-Ethyl naphth- alene, bed sed wsv nat	2- Methyl- anthra- cene, bed sed <2 mm, ug/kg (49948)
Time	ug/g (71921)	ug/g (01068)	ug/g (64848)	ug/g (01093)	ug/kg (49403)	ug/kg (49404)	ug/kg (49398)	ug/kg (49410)	ug/kg (49388)	ug/kg (49405)	ug/kg (49406)	ug/kg (49948)	ug/kg (49435)
Aug 04...	<.007	10.9	.1	<62	<50	<50	E1	E5	E5	E1	E10	<50	<50

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	4H-Cyclo-penta -[def]-phenan-threne, bs <2mm	9H-Fluor-ene, bed sed	Ace-naphth-ene, bed sed	Ace-naphth-ylene, bed sed	Anthra-cene, <2 mm,	Benzo-[a]-anthra-cene, bed sed	Benzo-[a]-pyrene, bed sed	Benzo-[b]-fluor-anthene, bed sed	Benzo-[ghi]-peryl-anthene, bed sed	Benzo-[k]-fluor-anthene, bed sed	Chry-sene, <2 mm,	Dibenzo-anthra-cene, bed sed	Fluor-anthene bed sed
	ug/kg (49411)	ug/kg (49399)	ug/kg (49429)	ug/kg (49428)	ug/kg (49434)	ug/kg (49436)	ug/kg (49389)	ug/kg (49458)	ug/kg (49408)	ug/kg (49397)	ug/kg (49450)	ug/kg (49461)	ug/kg (49466)
Aug 04...	E6	E2	M	E5	E7	E24	E27	E39	E17	E16	E28	<50	E49

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Indeno-[1,2,-3-cd]-pyrene, bed sed	Iso-phorone, bed sed	Naphth-alene, bed sed	p-Cresol, bed sed	Phenan-threne, bed sed	Phenan-thri-dine, bed sed	Pyrene, bed sed	Bed sediment, dry svd
	ug/kg (49390)	ug/kg (49400)	ug/kg (49402)	PCBs, bed	<2 mm, wsv nat	<2 mm, wsv nat	<2 mm, wsv nat	<2 mm, wsv nat
	<2 mm	<2 mm	<2 mm	sedimnt	field,	field,	wsv nat	sve dia
	field,	wsv nat	wsv nat	ug/kg (39519)	ug/kg (49451)	ug/kg (49409)	ug/kg (49393)	percent <62.5um (80164)
Aug 04...	E17	<50	<50	<5.00	<50	E20	<50	E45 .9